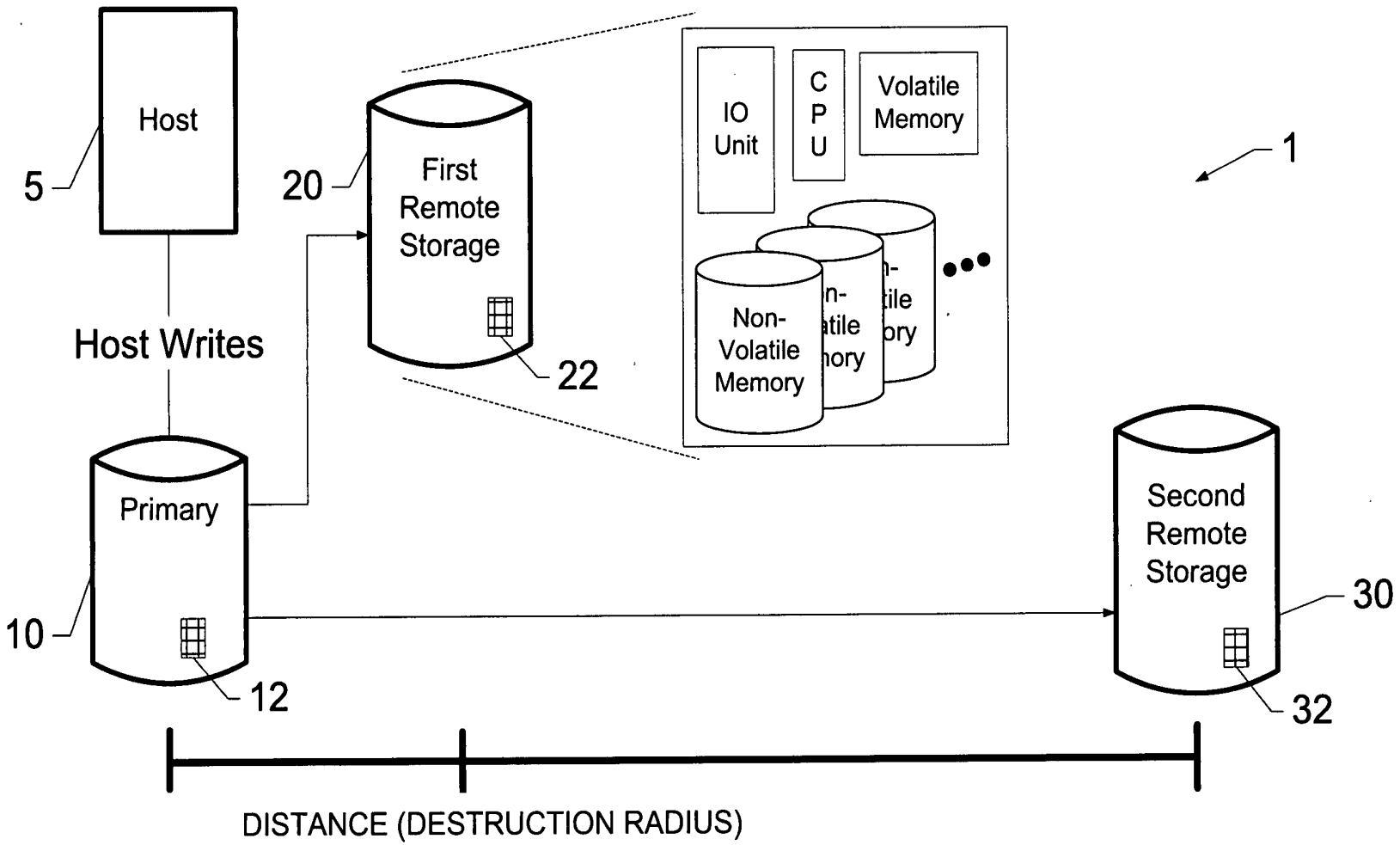
Host
5
20
First
Remote
Storage
22
IO
Unit
C
P
U
Volatile
Memory
Non-
Volatile
Memory
1
Host Writes
Primary
10
12
Second
Remote
Storage
30
32
DISTANCE (DESTRUCTION RADIUS)

FIG. 1

12

Write_Where (Track, Sector)	Write_What (data)	Seq_Num (value)	ACK by 2nd Rem Stor (value)	ACK by 1st Rem Stor RE receipt of fwd'd ACK from 2nd Rem Stor (value)
3, 200	010...	1	1	1
5, 126	100...	2	1	1
13, 500	111...	3	1	1
2, 096	110...	4	0	0
10, 312	001...	5	1	0
16, 821	101...	6	0	0

42 44 46 47 48

FIG. 2A

Write_Where (Track, Sector)	Write_What (data)	Seq_Num (value)	Rx'd fwd'd ACK from 2nd Rem Stor (value)
3, 200	010...	1	1
5, 126	100...	2	1
13, 500	111...	3	1
2, 096	001...	4	0
10, 312	110...	5	0
16, 821	101...	6	0

52 54 56 58

22

FIG. 2B

32

Write_Where (Track, Sector)	Write_What (data)	Seq_Num (value)
3, 200	010...	1
5, 126	100...	2
13, 500	111...	3
10, 312	001...	5

62 64 66

FIG. 2C

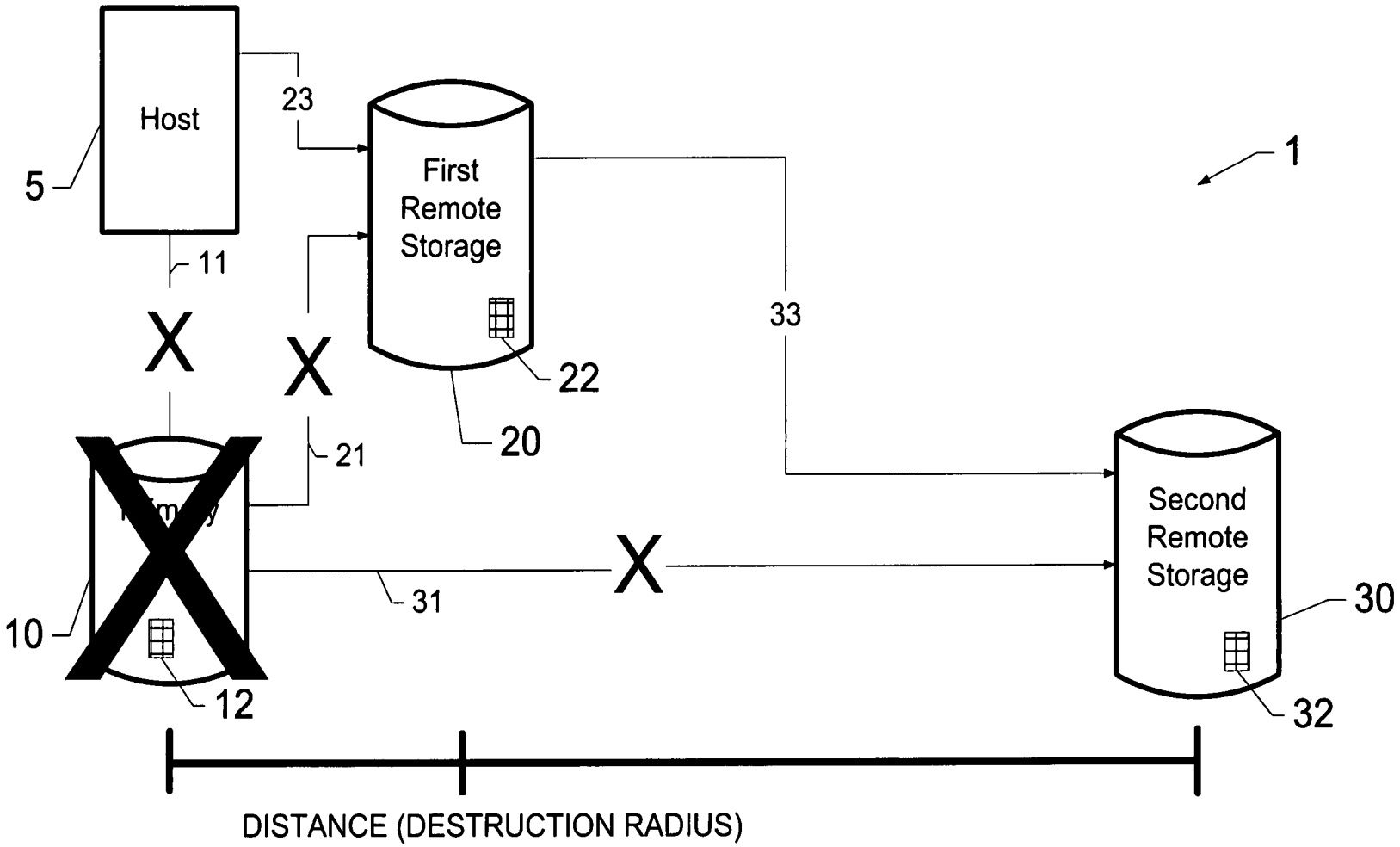
Host
5
23
First
Remote
Storage
1
11
33
22
20
21
Second
Remote
Storage
30
10
31
12
32
DISTANCE (DESTRUCTION RADIUS)

FIG. 3

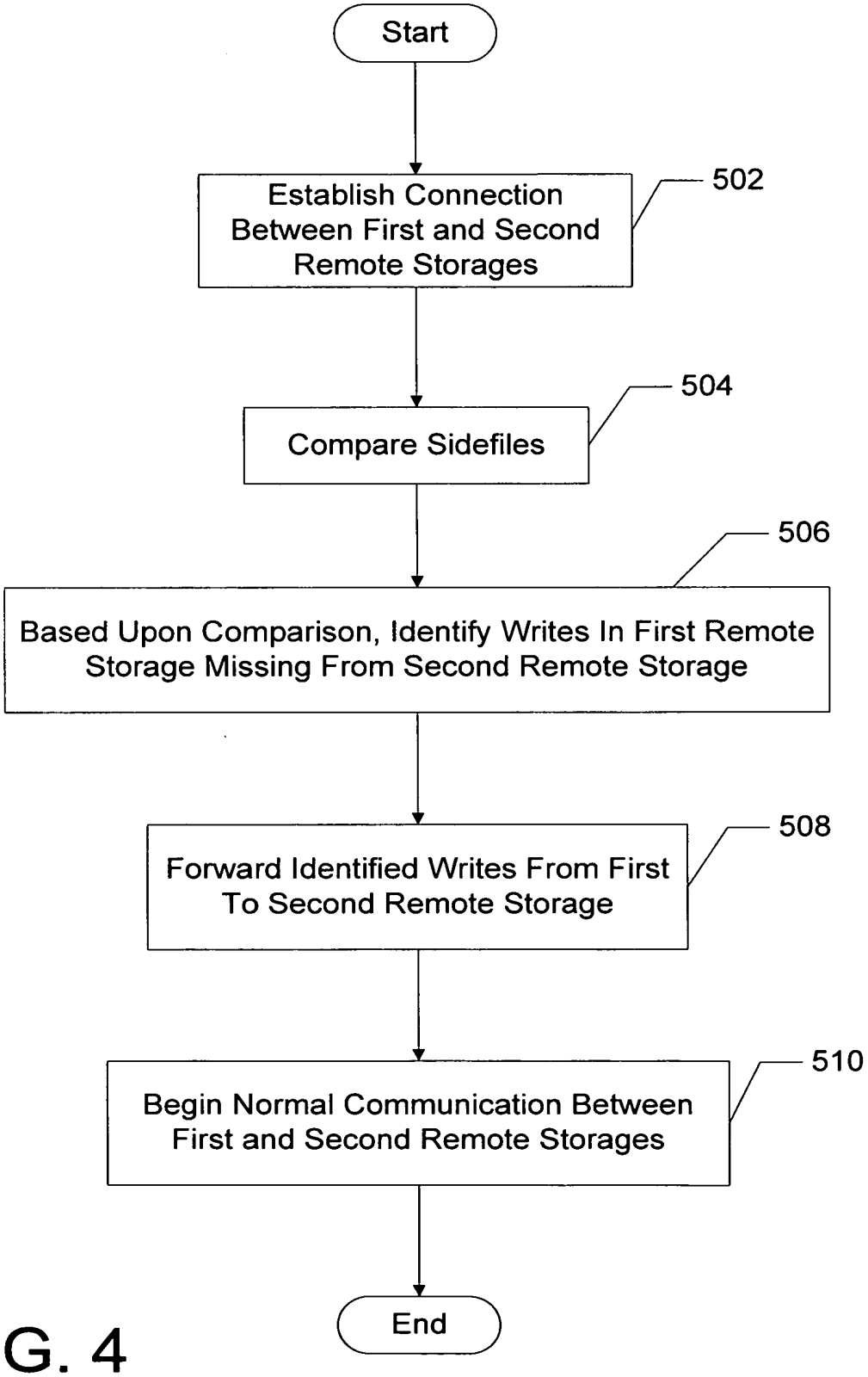
Start
Establish Connection Between First and Second Remote Storages
502
Compare Sidefiles
504
Based Upon Comparison, Identify Writes In First Remote Storage Missing From Second Remote Storage
506
Forward Identified Writes From First To Second Remote Storage
508
Begin Normal Communication Between First and Second Remote Storages
510
End

FIG. 4

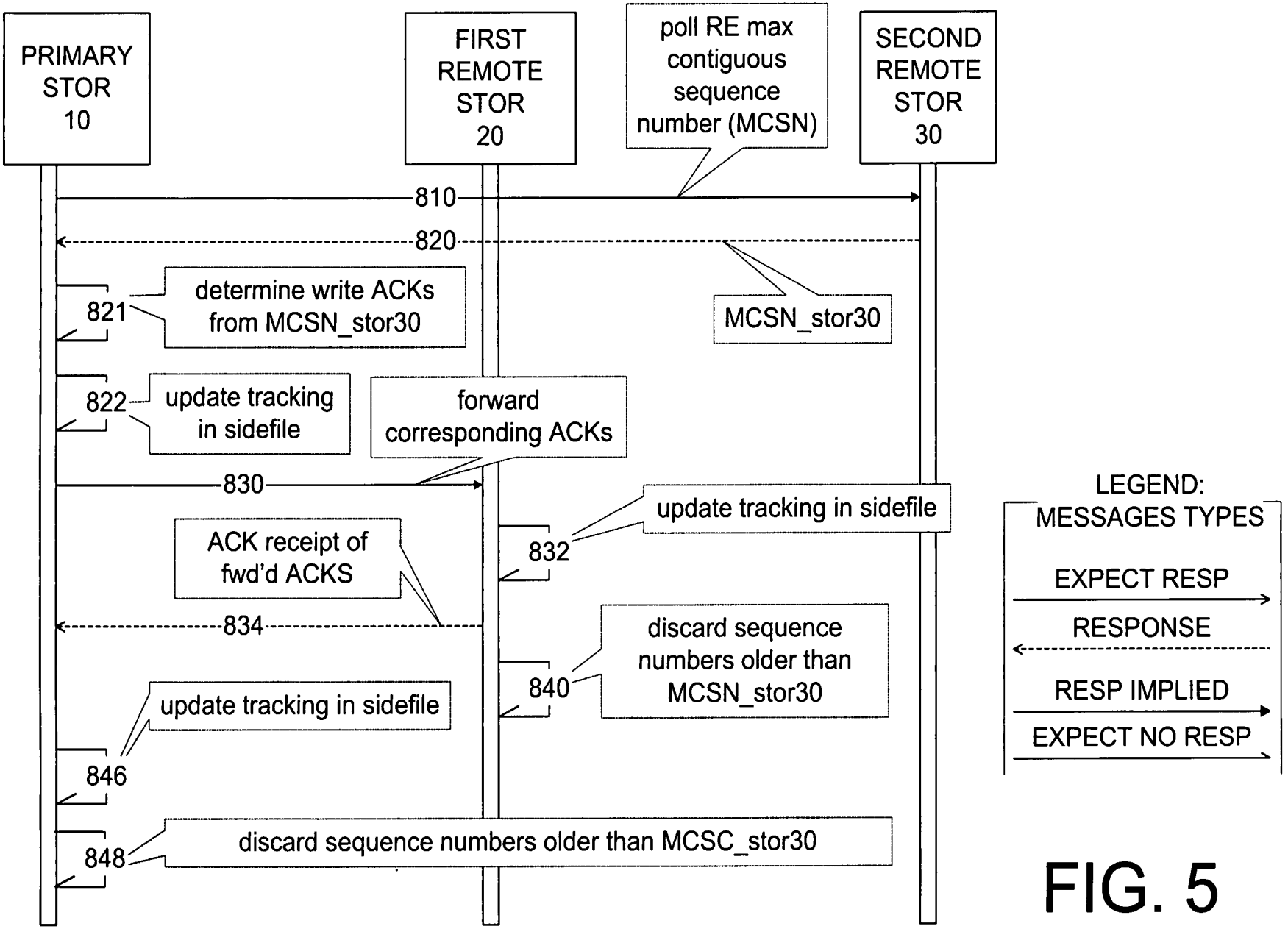
PRIMARY STOR 10
FIRST REMOTE STOR 20
poll RE max contiguous sequence number (MCSN)
SECOND REMOTE STOR 30
810
820
MCSN_stor30
821
determine write ACKs from MCSN_stor30
822
update tracking in sidefile
forward corresponding ACKs
830
update tracking in sidefile
832
ACK receipt of fwd'd ACKS
834
discard sequence numbers older than MCSN_stor30
840
update tracking in sidefile
846
848
discard sequence numbers older than MCSC_stor30
LEGEND:
MESSAGES TYPES
EXPECT RESP
RESPONSE
RESP IMPLIED
EXPECT NO RESP

FIG. 5

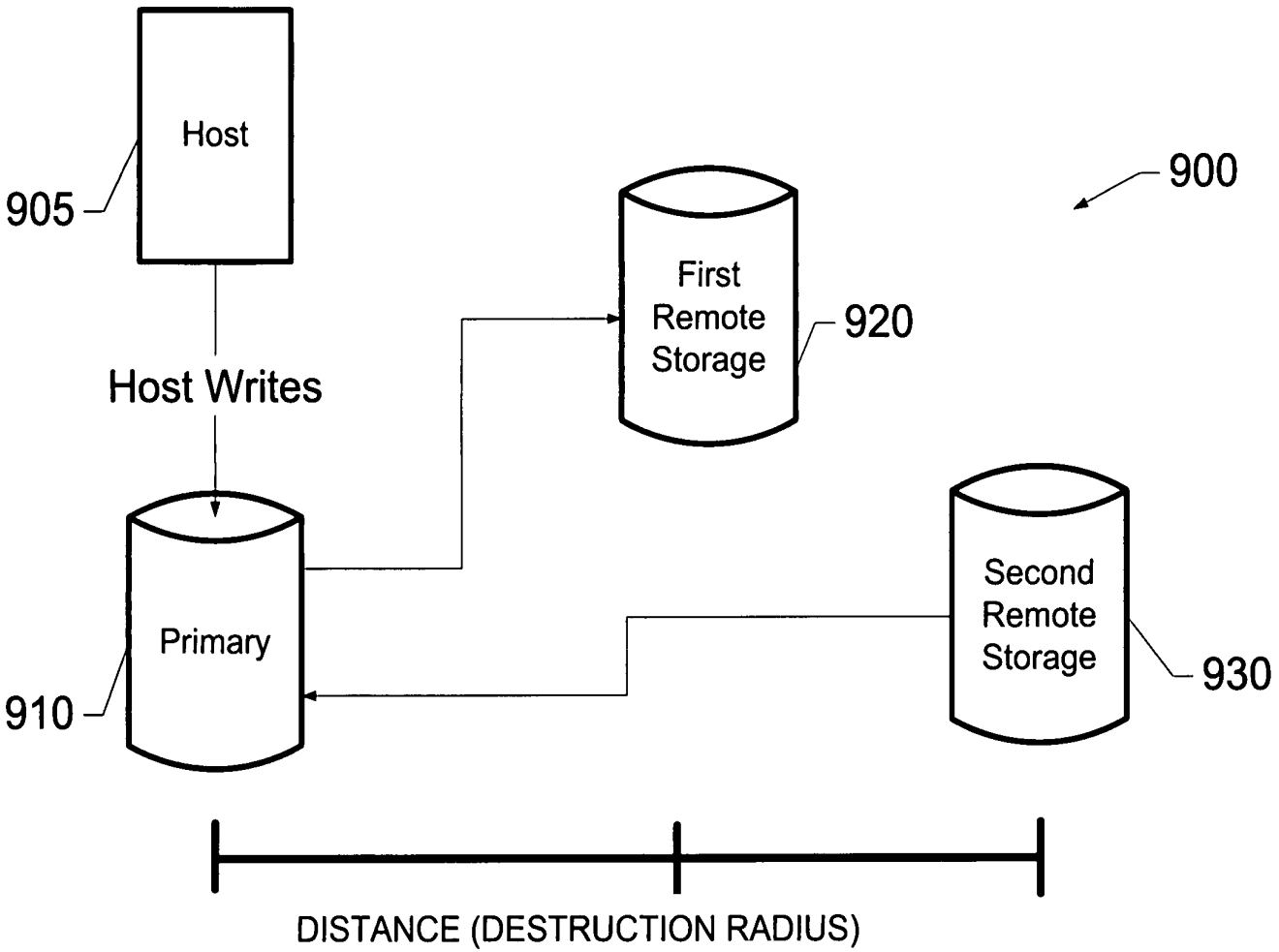

FIG. 6 (BACKGROUND ART)